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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,636	10/06/2003	Peter Ernest Page	0730.0063C	7805

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EDELL, SHAPIRO & FINNAN, LLC  
1901 RESEARCH BOULEVARD  
SUITE 400  
ROCKVILLE, MD 20850

EXAMINER

HOUSE, LETORIA G

ART UNIT	PAPER NUMBER
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3672

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/678,636

Applicant(s)

PAGE ET AL.

Examiner

Letoria House

Art Unit

3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-97 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-97 is/are rejected.
- 7) ☒ Claim(s) 22,43,68, and 79 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/10/04: 11/10/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested: Method and Apparatus of Suspending, Completing, and Working Over a Well.

### ***Claim Rejections - 35 USC § 112***

2. Claims 3-5, 7-11, 14-16, 18-22, 31-33, 35-39, 43, 46, 53-55, 5-62, 70-72, 74-78, 85-87, 89-91 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant uses the language and/or, is/are, and on or above in the claim language. Such terms fail to show what is and what is not included in the claimed subject matter, and results in confusion.

### ***Claim Objections***

3. Claims 22, 43, 68 and 79 objected to because of the following informalities:

Claim 22 is cited as dependent on claim 1, the Examiner interprets the claim as dependent on claim 12 because claim 1 is further limited by claim 11 in the same manner.

Art Unit: 3672

Claim 43 is cited as dependent on claim 29, the Examiner interprets the claim as dependent on claim 41 because claim 29 lacks antecedent basis for the term "tubing hanger."

Claims 68 and 79 are both dependent on claim 62 and recite the same limitation. The claims are duplicates.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-24, 29-41, 46, 47-66, 68-80, and 83-91 are rejected under 35 U.S.C. 102(e) as being anticipated by Patel (U.S. 2003/0196820).

With regard to claims 1, 12, 29, 47, and 62 Patel discloses an apparatus and method capable of performing the steps of: providing a first barrier (11, 36) in a well (See Figure 4 and brief description of the drawing); verifying the integrity of the first barrier (page 2, last two sentences of paragraph [0027]); thereafter providing at least a second barrier (55, 36) in the well above the first barrier defining a space between the first and second barriers (See Figure 6 and brief

description of the drawing); and, verifying the integrity of the second barrier (page 2, last two sentences of paragraph [0027]), the method characterized in that the first and second barriers are below the depth of the lowermost end of a completion string when the completion string is installed in the well and remain in position while the well is suspended . Although the reference does not state that the barriers are below the depth of the lowermost end of a completion string, in viewing figures 4 and 6 it is easily discernable that the barriers as disclosed are capable of being positioned in such a manner.

The reference also teaches relying on the first and second barrier to provide well control during installation of a completion string in the well, the completion string having a lowermost end; and, installing a production flow control device (21) on the well for regulating the flow of fluids through the well, the method characterized in that the first and second barriers are below the depth of the lowermost end of the completion string when the completion string is installed or removed from the well.

The Examiner takes Official Notice that the following components are included in the referenced apparatus as they are old and well known requirements for systems like that disclosed in the reference: a well head, the well head containing a production flow control device, a christmas tree as a production flow control device, a tubing spool installed in the well head prior to the step of installing the completion string in the well, the completion string having an uppermost end terminating in a tubing hanger from which the completion string is suspended.

Art Unit: 3672

With regard to claims 2-11, 13-24, 30-41, 46, 48-61, 63-66, 68-80, and 83-91 the reference teaches:

Verifying the integrity of the second barrier further comprising the step of measuring the pressure in the space between the first and second barriers (See page 2, second sentence of paragraph [0030]); a signal receiving means for receiving the signal generated the pressure measuring means – although the reference does not explicitly teach a signal receiving means, it teaches signal transmission, therefore the Examiner takes Official Notice that it is old and well known in the art of smart wells that there is a signal receiving device included in an apparatus that transmits signals; a means for transmitting the signal from the pressure measuring means to the pressure signal receiving means (24, 29); the pressure measuring means as a transducer – although the reference does not explicitly teach the measuring means as a transducer, it does teach the use of sensors which may be a transducer; the first or second barrier as a straddle (11, 36, 55); the first or second barrier comprising a combination of a physical device (24) (See page four, second to last line of paragraph [0042]), a means for securing the position of the physical device, and a sealing means (28); a sealing means as a formation isolation device; the sealing means positioned distally from the physical device; installing a liner hanger (34) into the well; the first or second barrier (11 & 36, 55 & 36) provided within the first or second liner hanger (34); the step of installing a first or second liner, although the reference does not explicitly state that there is a liner installed, there is a liner hanger packer (34) installed in the apparatus from which it is easily deduced that a liner is included in

Art Unit: 3672

the apparatus as disclosed; the first or second barrier provided within the first or second liner; at least one casing string (12) and the first or second barrier provided within the at least one casing string.

5. Claims 92-97 are rejected under 35 U.S.C. 102(e) as being anticipated by Garrett et al. (U.S. 6,810,954). Note Figure 6.

With regard to claim 92, Garrett et al. discloses an apparatus capable of performing the steps of: forming an assembly by installing a completion string (50) terminating at its upper end in and suspended from a tubing hanger (42) in the body of the horizontal christmas tree (4); and running the assembly to the sub-sea well, the method characterized in that the tubing hanger and the horizontal christmas tree are above the water-line during the step of forming the assembly.

With regard to claim 93, the reference teaches the step of forming the assembly further comprising the step of landing and locking the tubing hanger in the body of the christmas tree. See column 6, lines 8-13.

With regard to claims 94 -96, the reference teaches the method further comprising the step of verifying the integrity of the completed assembly above the water line; the step of verifying the integrity of the completed assembly further comprising the step of verifying hydraulic and electrical interfaces between the tubing hanger and the body of the christmas tree; and verifying the pressure integrity of the assembly. The Examiner takes Official Notice that testing of hydraulic and electrical components are included in the steps of assembling and

Art Unit: 3672

operating the referenced apparatus as such testing is an old and well known requirements for the named systems. Additionally, the purpose of the reference is to provide a christmas tree arrangement allowing for dual barriers between the production fluids and the local environment within the tree cap, thereby requiring pressure testing of the assembly.

With regard to claim 97, the reference discloses the step of running the assembly to the well head comprising the step of using a lower-riser package.

See column 6, lines 38-40.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.



Art Unit: 3672

6. Claims 25-27, 42-44, 67, and 81 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel (US 2003/0196820) in view of Garrett et. al. (U.S. 6,810,954). Note Figure 6 of Garrett et al. and brief description of drawing.

Patel discloses the apparatus as applied to claims 1-24, 29-41, 46, 47-66, 68-80, and 83-91 above. Patel discloses a double barrier system located below the lower end of a completion string that is hung within a well head with a christmas tree connected there to, wherein pressure measurements are taken at the isolation zone. However, Patel does not teach the use of a horizontal christmas tree connected to the well head. Garrett et al. discloses a horizontal christmas tree connected to a well head for use in extended well tests, wherein the christmas tree and tubing hanger may be installed in one trip. Garrett et al. suggests that it a horizontal christmas tree is useful in that it enables the completion string to be pulled out of the well without the need to recover the tree. Garrett et al. also teaches that it is conventional practice to install and lock the tubing hanger into the body of the christmas tree prior to installing the production flow control device on the well, and in the alternative to unlock the tubing hanger from the body of the christmas tree in order to remove the tubing hanger from the christmas tree. Additionally Garrett et al. teaches that the christmas tree and completion string may be removed as an assembly. Therefore it would have been obvious to one skilled in the art at the time of the invention to modify the apparatus and method of Patel to include the horizontal christmas tree of Garrett et al. in order to reduce completion time and as a result reduce cost.

Art Unit: 3672

7. Claims 28, 45, and 82 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel (US 2003/0196820) in view of Bartlett. (U.S. 2004/0079529). Patel discloses the apparatus as applied to claims 1-24, 29-41, 46, 47-66, 68-80, and 83-91 above. Patel discloses a double barrier system located below the lower end of a completion string that is hung within a well head with a christmas tree connected there to, wherein pressure measurements are taken at the isolation zone. However, Patel does not teach the use of a vertical christmas tree connected to the well head. Bartlett discloses the use of a vertical christmas tree (figure 1, item 22) in sub sea operations and suggests that a vertical christmas tree is suitable for completion operations. Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the apparatus of Patel to incorporate the vertical christmas tree of Bartlett as an obvious design choice.

### ***Conclusion***

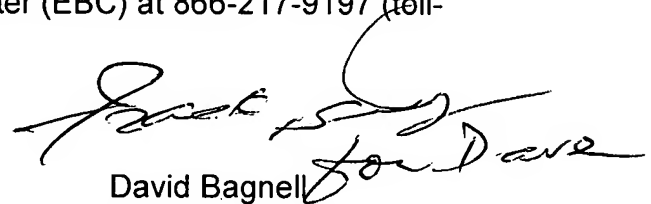
8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following references disclose zonal isolation or pressure testing means: Rytlewski et al. (U.S. 5,704,426, Hromas et al. (U.S. 4,907,655), Barfield (4,605,074), Becker et al. (5,337,601), Watters et al. (U.S. 6,732,797), Berger et al. (5,803,186), Krueger et al. (U.S. 6,609,568), Schultz et al. (U.S. 5,287,741).

Art Unit: 3672

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Letoria House whose telephone number is (571) 272-8118. The examiner can normally be reached on M-F, 7:00 A.M. - 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David Bagnell  
Supervisory Patent Examiner  
Art Unit 3672

LGH